Design and Technology Curriculum Intent

We hope that through the study of Design and Technology at Madeley, we ignite a passion in design and manufacture for all pupils regardless of age, gender, ability and background. To develop an awareness of the past, current and future within this field.

The Design and Technology curriculum will be revised yearly in order to evaluate the impact and effectiveness of planning for progression. Very recently in the September of 2023 Madeley employed a new team of experienced Design and Technology teachers each with their own interests and areas of expertise. Mrs Sharratt, Mr Pugh and Mrs Halstead.

Key Stage 3

The curriculum is a journey from Year 7 to 9 which will require no previous experience from primary school however we have already witnessed an abundance of interest, skills and knowledge that has been acquired by the new Year 7 cohort before they reach us. We aim to gradually build on knowledge and skills in line with the National Curriculum. We want to foster an interest in material properties and origins, ethics, sustainability and the environment through designing and making user centred products via live and real briefs.

Key Stage 4

GCSE Design and Technology and GCSE Food Preparation and Nutrition are both options for pupils in Year 10 and 11 and not compulsory.

The KS4 curriculum is split in two halves with Year 10 being skills and knowledge building ready for the NEA, non exam assessment portfolio in Year 11 and the final written exam at the end of the Year 11.

Assessments:

During Year 7 – 9

Students in Key stage three currently have three lessons each fortnight, one of those lessons focus on Food Preparation and Nutrition.

Theoretical and practical tasks will be assessed at the end of each topic. Retention of knowledge will be quizzed, and practical tasks will be assessed in line with the National Curriculum requirements this progress will be shared with parents in line with the school reporting system.

During Year 10

Students will complete an assessment during or at the end of each topic in year 10, this will be in the form of past paper exam questions. Each topic will be recorded and at any given stage a working at percentage can be given. Each topic has a workbook created to guide the pupil through and can then later be used for revision.

While spending 1 hour each week on the theoretical aspects of the course the other 2 lessons will be spent conducting research and working on mini-NEA tasks to help practice and prepare for independent NEW completion in Year 11.

During November, as per the whole school assessment calendar, both Year 10 and 11 will sit a Mock exam to help them prepare for the real exam at the end of Year 11.

During Year 11

Within Design and Technology:

The written examination is equal to 50% of the qualification.

The Non-examined assessment, NEA is equal to 50% of the qualification.

The exam paper consists of two sections. Section A is assessed on the core content and

Section B is assessed on the material category students have chosen.

We have chosen Polymers as the focus for the current Year 1o and Year 11 as feedback from pupils suggests that historically while at Madeley they have focussed on this material more than others.

Section A: Core

This section is 40 marks and contains a mixture of different question styles, including open-response, graphical, calculation and extended-open-response questions. There will be 10 marks of calculation questions in Section A.

Section B: Material categories

This section is 60 marks and contains a mixture of different question styles, including open-response, graphical, calculation and extended-open-response questions. There will be 5 marks of calculation questions in Section B.

The NEA consists of an independent student lead project based on a contextual challenge released by Pearson on the 1st June – so work and ideas can be started before entering Year 11.

The project will test students’ skills in investigating, designing, making and evaluating a prototype of a product. Pupils must work independently on their own portfolio. Tasks will be internally assessed and externally moderated.

The marks are awarded for each part as follows.

o 1 – Investigate (16 marks)

o 2 – Design (42 marks)

o 3 – Make (36 marks)

o 4 – Evaluate (6 marks

While completing the NEA theoretical knowledge will be revised from last year and more specialist knowledge of polymers will be covered.

Within Food Preparation and Nutrition:

Component 1: Principles of Food Preparation and Nutrition:

Written examination: 50% of qualification

Section A: questions based on stimulus material.

Section B: structured, short and extended response questions to assess content related to food preparation and nutrition.

Component 2: Food Preparation and Nutrition in Action, Non-examination assessment: 50% of qualification

Assessment 1: The Food Investigation Assessment, 1: 8 hours

A scientific food investigation which will assess the learner's knowledge, skills and understanding in relation to scientific principles underlying the preparation and cooking of food.

Assessment 2: The Food Preparation Assessment, Assessment 2: 12 hours

Prepare, cook and present a menu which assesses the learner’s knowledge, skills and understanding in relation to the planning, preparation, cooking and presentation of food.