

Subject – Technology

Subject Leader: Mrs Owen

Subject teachers: Mr Lambert, Miss Wood, Mrs Oakes, Mr Storer (technician)

Department aims:

Design and Technology is a subject that provides students with the resources required to develop a wide range of skills that are relevant to all aspects of school and adult life. The subject has a three focus areas that students can elect to work in. These are: Resistant Materials, Engineering and Food Technology

The purpose of Design is to help students to:-

- Be creative and Innovative in their thinking and solutions.
- Be able to work independently, support others and work in teams
- Promote visual and aesthetic awareness in their ideas.
- Communicate effectively to others using a wide variety of techniques
- Use specialist ICT resources to support designing and making
- Make high quality 2D and 3D outcomes in a wide variety of media and materials
- Develop the skills to determine the direction of their work
- Recognise the need to challenge and extend themselves.
- Be aware of the impact and responsibility a designer has on the environment.

Design education at Birches Head is a rewarding experience, where the aim for all students is to be confident in applying their skills, have the desire to achieve success and be proud of the work they do so that in leaving Birches Head they are capable, adaptable and successful members of society.

KS3

In years 7, 8 and 9 our students move round a series of design and make assignments which are delivered by specialist teachers in specialist rooms. The aim in each project brief is to introduce and develop material specific skills as well as helping each student to learn how to apply a creative and analytical approach to problem solving. Every student has access to the full curriculum as they move through the projects, gaining experience and confidence working with the full range of materials. The specific projects we use are reviewed and developed each year, but are generally focused on the following:

- Food – learning nutrition, healthy diet, safe cooking practices and basic cooking skills.
- Textiles – learning to use a sewing machine accurately and safely as well as developing functional and decorative hand sewing skills to create a marketable functional product.
- Resistant Materials – learning to work accurately with wood using a range of hand and machine tools. Including marking out, drilling, cutting (by hand and with a hegener saw), joining and finishing. They will also use computer aided design and manufacturing skills.
- Graphics – learning to present ideas using a range of skills including 2D and 3D sketching and ICT. This is delivered as a strand in every project as well as in a distinct project brief.

KS4

At the end of year 9 students make their GCSE option choices which they then follow for 2 years to year 11. As a department we use the AQA exam board qualifications which consists of a 1.5 hour examination carrying 40% of the marks and one quality design project, worth 60% of the final mark.

Throughout the two year course, KS4 Students have the opportunity to tackle a range of projects in different materials. The design aspect of the course enables them to improve their understanding of the basic design process, to develop their ability to solve problems in a logical and creative way and to evaluate the success of their realised solutions. Through investigations and their involvement in practical work, students are expected to gain a fundamental knowledge of materials in their specialised area. They will learn about tools, equipment and processes and they should improve their levels of skill.

Students will also be taught about the importance of safety and it is anticipated that they will adopt safe working habits.

Presentation skills will include graphics which will involve the production of computer generated drawings as well as freehand and formal drawing. Students will be encouraged to make full use of our CAD/CAM facilities to realise their designs.

How can I help support my child's learning in Technology?

Encouraging your child to cook, sew and help with practical activities will be a huge help to them in developing their practical skills. It will also give them a wider experience of materials and processes to help them deepen their understanding. Discussing their design ideas with them will also help them to gain a better understanding of what they are doing and how it can be improved. Understanding and predicting how good an idea could be and considering different ways to improve it is a key skill that children usually find very difficult. Software used in school includes

Starting Wednesday 14th September from 2.45 to 4pm we will be offering GCSE students the chance to extend the quality of their coursework, by attending regular P6 sessions in Design and Technology.

Useful websites

www.technologystudent.com

www.bbc.co.uk/schools/gcsebitesize/design

<http://www.design-technology.info>

<http://www.howstuffworks.com>